

**Office Action Summary**

Application No.

09/990,137

Applicant(s)

LO, WILLIAM

Examiner

Nitin C. Patel

Art Unit

2116

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-145 is/are pending in the application.
- 4a) Of the above claim(s) 15-29, 44-58, 73-116 and 131-145 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14, 30-43, 59-72 and 117-130 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>11/21/2001</u> | 6) <input type="checkbox"/> Other: ____   |

### **DETAILED ACTION**

1. Claims 1 – 145 are presented for examination.

#### ***Election/Restrictions***

2. During a telephone conversation with attorney Mr. Eric B. Janofsky on November 19, 2004 a provisional election was made without traverse to prosecute the invention of Group - I, claims 1 – 14, 30 – 43, 59 – 72, and 117 - 130. Affirmation of this election must be made by applicant in replying to this Office action. Claims 15 – 29, 44 – 58, 73 – 116, and 131 - 145 withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

3. Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1 – 14, 30 – 43, 59 – 72, and 117 - 130, drawn to energy saving, classified in class 713, subclass 320.
- II. Claims 15 – 29, 44 – 58, 73 – 116, and 131 - 145, drawn to network device, classified in class 709, subclass 220, 223 – 224, 227.

4. Inventions I and II are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention I has separate utility such as energy saving circuit. In the instant case, invention II has separate utility such as network device. See MPEP § 806.05(d).

5. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

Art Unit: 2116

6. Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II, restriction for examination purposes as indicated is proper.

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1 – 8, 14, 30 – 37, 43, 59 – 65, 72, 117 – 124, and 130, are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Bar-Niv, US Patent 6,442,142 B1.

9. As to claims 1, 30, 59, and 117, Bar-Niv discloses a system and method to reduce power consumption of a communication transceiver comprising:

a. a sense circuit [10 energy detection circuit] that communicates with said receiver [34, link monitor] and that generates a receive signal [Energy\_On signal to level 1, control output to power-up power module 30] when connection activity [signal level] that exceeds a first threshold [voltage on communication line exceeds 300mV] is detected by said receiver [12], wherein said energy saving circuit [10] powers down [by generating Energy\_On signal to level 0] said first physical layer [32, transceiver circuitry] when said receiver does not detect said connection activity for a first predetermined period to reduce power consumption of said first physical layer [col. 1, lines 51 – 67, col. 2, lines 1 – 50, col. 4, lines 6 – 67, col. 5, lines 57 – 67, col. 6, lines 1 – 32, fig. 1].

Art Unit: 2116

10. As to claims 2, 31, 60, and 118, Bar-Niv discloses an autonegotiation circuit [36, autonegotiation mechanism] that communicates with said sense circuit and that powers up said first physical layer [32] and attempts to negotiate a connection with a second physical layer of a second network device when said sense circuit generates said receive signal [it is functionality of autonegotiation process][col. 2, lines 32 – 49, col. 5, lines 65 – 67, col. 6, lines 1 - 56].

11. As to claims 3, 32, 61, and 119, Bar-Niv discloses energy saving circuit [10] wherein said sense circuit enters a sense state and powers down said first physical layer when said sense circuit is reset [if machine 26 remains in state 88 for predetermined duration without receiving a second SIGON, machine transit back to state 80] [col. 5, lines 48 – 57].

12. As to claims 4 – 6, 33 – 35, 62 – 63, and 120 – 122, Bar-Niv discloses a first timer that generates a first signal after a first period [predetermined time period 64 ms], reset of timer, and time out before autonegotiation completed situations [col. 5, lines 48 – 67, col. 6, lines 1 – 32].

13. As to claims 7 – 8, 36 – 37, 64 – 65, and 123 – 124 Bar-Niv discloses link circuit [34, link monitor] that generates link On/Off signal and triggers a link state when autonegotiation is complete and a link with second physical layer is established [establishing a link with second physical layer is inherent to autonegotiation process][col. 4, lines 17 – 25, col. 5, lines 65 – 67, col. 6, lines 1 – 32].

14. As to claims 14, 43, 72, and 130 Bar-Niv teaches to generate a control signal [Energy\_On] to control the power of transceiver circuitry [32] therefore the same signal can be used to indicate status of the network device with LEDs as indicating device, which are common in use for indicating the status.

Art Unit: 2116

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

16. Claims 9 – 13, 38 – 42, 66 – 70, and 125 – 129 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bar-Niv, US Patent 6,442,142 B1 as applied to claims 1, 30, 59, and 117, above, and further in view of Foster, US Patent 6,026,494 [cited by applicant].

17. As to claims 9, 38, 66, and 125, Bar-Niv discloses a system and method to reduce power consumption of a communication transceiver comprising: a sense circuit [10 energy detection circuit] that communicates with said receiver [34, link monitor] and that generates a receive signal [Energy\_On signal to level 1, control output to power-up power module 30] when connection activity [signal level] that exceeds a first threshold [voltage on communication line exceeds 300mV] is detected by said receiver [12], wherein said energy saving circuit [10] powers down [by generating Energy\_On signal to level 0] said first physical layer [32, transceiver circuitry] when said receiver does not detect said connection activity for a first predetermined period to reduce power consumption of said first physical layer [col. 1, lines 51 – 67, col. 2, lines 1 – 50, col. 4, lines 6 – 67, col. 5, lines 57 – 67, col. 6, lines 1 – 32, fig. 1].

However Bar-Niv does not disclose the use of second timer in sense circuit [driver] that communicates with transmitter [transceiver] and when second timer times out the transmitter is turned on and generate pulse. In summary, Bar-Niv does not teach to use a second timer in sense circuit.

Foster Foster discloses a system and method with algorithm to reduce power consumption of an auto-negotiating Ethernet transceiver by enabling a driver [sense circuit] for transceiver to alternate between a typical higher-power consumption mode and low-power energy consumption mode when network link is no longer detected and driver causes the Ethernet transceiver to power down and use of two timers with autonegotiation [col. 3, lines 1 – 14, col. 5, lines 33 – 67, col. 6, lines 1 – 56, fig. 3]

It would have been obvious to one of ordinary skill in art, having the teachings of Bar-Niv and Foster before him at the time of invention was made, to modify a sense circuit [10 energy detection circuit] disclosed by Bar-Niv to include two timers and their use as taught by Foster in order to obtain a network transceiver advantageous over prior art to provide for lowering the power drain on internal battery of a portable computer whenever a link to a network is physically disconnected from auto-negotiating transceiver and continue to auto-negotiate a connection to the network so that if physical connection is reestablished the portable computer could continue to communicate with the network [col. 2, lines 27 – 43].

18. As to claims 10 – 12, 39 – 41, 67 – 69, and 126 – 128, Foster teaches to use of two counters with reset, timeout and generation of signal for different scenario [col. 5, lines 41 – 67, col. 6, lines 1 – 48].

19. As to claims 13, 42, 70, and 129, Foster teaches detection of connection configuration and to adjust a connection configuration of first physical layer with second physical layer [col. 4, lines 45 – 52].

20. **Examiner's note:** Examiner has cited particular columns and line numbers in the references as applied to the claims above for the convenience of the applicant. Although the

Art Unit: 2116

specified citations are representative of the teachings of the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

**21. Prior Art not relied upon:**

Please refer to the references listed in attached PTO-892, which, are not relied upon for claim rejection since these references are relevant to the claimed invention.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nitin C. Patel whose telephone number is 571-272-3675. The examiner can normally be reached on 7:00am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne H. Browne can be reached on 571-272-3670. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Application/Control Number: 09/990,137

Page 8

Art Unit: 2116

Nitin C. Patel

December 1, 2004

A handwritten signature in black ink, consisting of a large, stylized 'A' followed by a horizontal line that curves upwards at the end.

**A. ELAMIN**  
**PRIMARY EXAMINER**